Quick Install Guide

ORiNOCO AP-4000MR-LR
ORiNOCO AP-4900MR-LR

Quick Install

Proxim wireless

Part Number 73305/2 (Print version)
Part Number 73307/2 (CD version)

NOTICES

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INTRODUCTION

The AP-4000MR-LR and AP-4900MR-LR are ruggedized tri-mode APs optimized for outdoor deployments. They are equipped with the following embedded radios:

- **AP-4000MR-LR:** One embedded 5.8 GHz (802.11a) radio and one embedded 2.4 GHz (802.11b/g) radio, enabling simultaneous support of 802.11a, 802.11b, and 802.11g clients. The unit also supports Mesh operation on either the 2.4 or 5.8 GHz band.
- **AP-4900MR-LR:** One embedded 4.9 GHz radio and one embedded 2.4 GHz (802.11b/g) radio, enabling simultaneous support of 4.9 GHz, 802.11b, and 802.11g clients. The 4.9 GHz radio is for use in the licensed 4.9 GHz Public Safety band; only users with licenses to operate in this band should access it. The unit also supports Mesh operation on either the 2.4 or 4.9 GHz band.

There are two versions of the AP-4000MR-LR/4900MR-LR hardware. Differences between hardware versions are highlighted in this manual as necessary. See Figure 1 through Figure 4. The Identifying Your Hardware Variant section of this guide will help you determine which variant you have.

The APs can operate either using PoE with the combination DC power supply/injector provided or directly from a 100 - 240 VAC power source (AC cable ordered separately).

The units feature internal lightning and surge protection on the AC and DC power ports, the Ethernet port, and on both antenna ports. External antenna lightning protection is not needed.

Each unit is equipped with:

- **Power/Ethernet port:** used for Ethernet connection and Power over Ethernet (PoE) using the supplied power injector.
- **Serial connection:** used for entering commands in the Command Line Interface (CLI). FC versions of the product are not equipped with a serial connection.
- **LED indicator(s):** dual LEDs used to indicate the power and operational states of the unit. FC versions of the product are equipped with a single power LED on the back of the unit in the cooling fin area.
- **AC power input:** enables direct power from external AC power source.
- **External antenna connectors (two):** one for 2.4 GHz operation, the other for either 5.8 GHz or 4.9 GHz operation, depending on your product model.
- **Grounding screws (two)**

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Note:

This product does not contain internal antennas. At least one external antenna must be used to make the product operational. For information on antennas authorized for use with this product, refer to the *Safety and Regulatory Compliance Guide* on the installation CD.

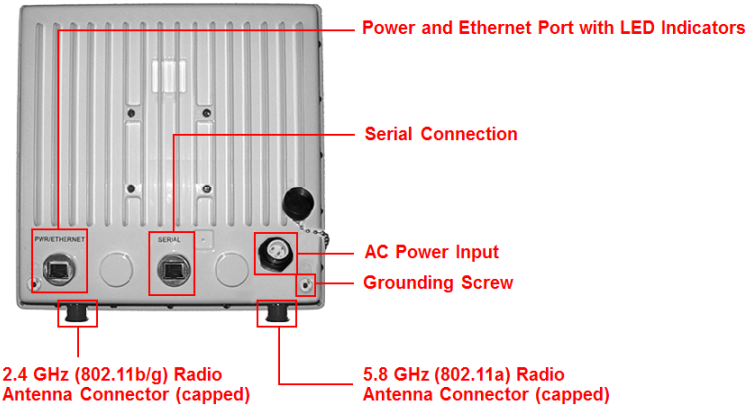

Figure 1: AP-4000MR-LR Unit (Dual LEDs and Serial Connection)

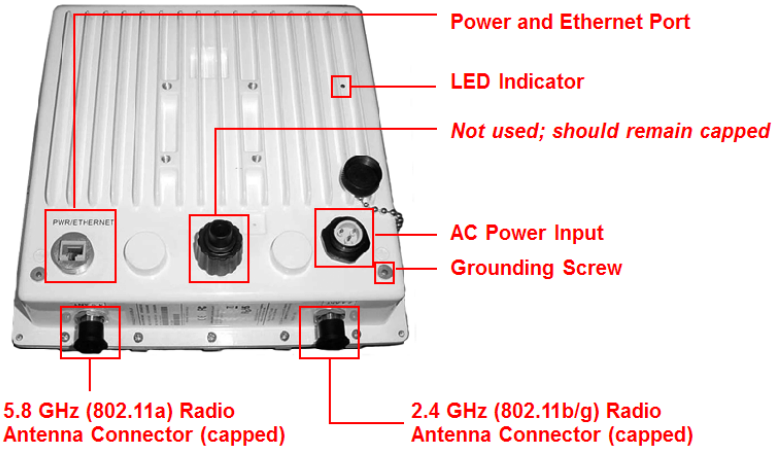

Figure 2: AP-4000MR-LR FC Unit (Single LED and No Serial Connection)

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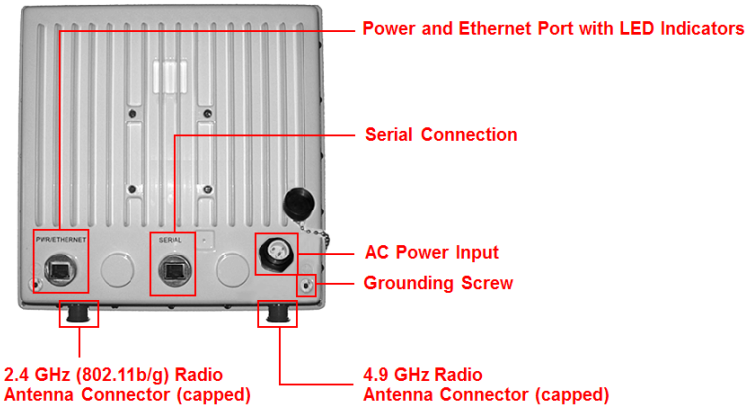

Figure 3: AP-4900MR-LR Unit (Dual LEDs and Serial Connection)

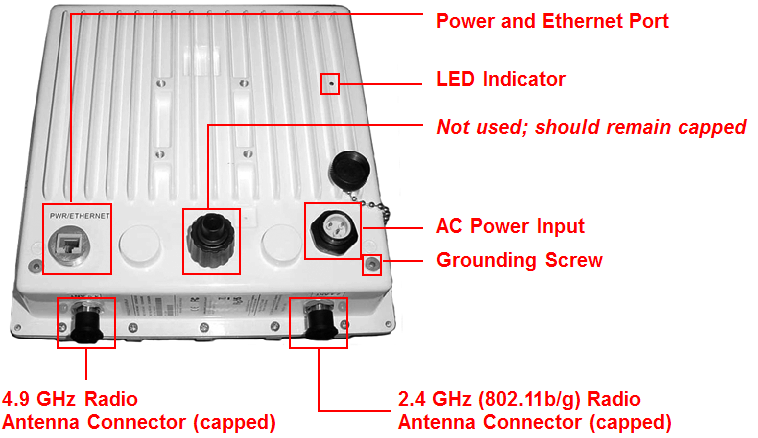

Figure 4: AP-4900MR-LR FC Unit (Single LED and No Serial Connection)

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PACKAGE CONTENTS

Each shipment includes the items in the following table. Verify that you have received all parts of the shipment.

Note:

Unless listed here, cables are not included with the unit.

AP-4000MR-LR Unit or AP-4900MR-LR Unit	
RJ11 to DB9 serial connector (not included with FC units)	
Installation CD (1 ea.)	
Power Injector and Cord (1 ea.)	
Cable Termination Kit	Kit includes: A. RJ45 connectors (2) B. Sealing caps (2) C. Lock nut D. Sealing nut E. Grounding screws (2) A B C D E

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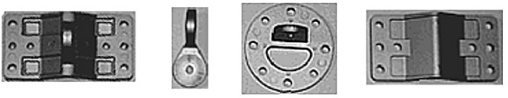
<table>
<tr><td>Mounting Kit</td><td>Kit includes the following:
A. Mounting bracket for wall/pole
B. Extension arm
C. Mounting plate to enclosure
D. Mounting bracket for pole mounting
 
A B C D</td></tr>
<tr><td>Mounting Hardware</td><td>The following mounting hardware is included with mounting kit:
Qty. Description
6 ea Plain washer #5/16
2 ea. Hex cap screw NC 5/16-18 x 35
2 ea. Nut NC 5/16-18
4 ea. Helical spring lock washer # 1/4
4 ea. Helical spring lock washer #5/16
2 ea Hex cap screw NC 5/16-18 x 80
4 ea. 68764, Screw, Machine, Pan, Phillips, 1/4”-20, 5/8”L </td></tr>
<tr><td>Rubber Tape Strip</td><td> </td></tr>
</table>

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HARDWARE AND SOFTWARE INSTALLATION

IMPORTANT!

Before installing this product, see *Safety and Regulatory Compliance Information* on the product CD for important information.

IMPORTANT!

All units must be installed by a suitably trained professional installation technician or by a qualified installation service.

WARNING!

To ensure proper grounding, use the hole at the bottom point on the back of each unit and the provided grounding screws to attach a ground wire of at least 10 AWG stranded to each unit. Use proper wire grounding techniques in accordance with local electric codes.

Notes:

- Be sure to read the Release Notes file on the product CD as it contains software version and driver information that may not have been available when this document was produced.
- Equipment is to be used with, and powered by, the power injector provided or by a power injector that meets these requirements:
  - UL-Listed/ITE (NWGQ)
  - Limited Power Source Output per UL/IEC 60950
  - CE-marked
  - Approved for Power-over-Ethernet
  - Rated output, 48 Vdc/0.42 A
  - Pinout follows 802.3af standard for mid-span devices

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Step 1: Choose a Location

To make optimal use of the unit, you must find a suitable location for the hardware. The range of the radio unit largely depends upon the position of the antenna. Proxim recommends you do a site survey, observing the following requirements, before mounting the hardware.

- The location must allow easy disconnection of power to the radio if necessary.
- Air must be able to flow freely around the hardware.
- The radio unit must be kept away from vibration and excessive heat.
- The installation must conform to local regulations at all times.

The unit is designed to directly mount to a pole or wall. Using the supplied brackets and hardware, you can mount them to a 1.25 inch to 3-inch pole (outside diameter). Longer bolts (not supplied) are required for mounting the units to a larger diameter pole. Using just one of the mounting brackets, you can mount it to a wall or other flat surface.

Caution!

Proxim recommends the use of a lightning arrestor at the building ingress point. You can purchase the Proxim Lightning Protector; see the documentation that comes with the Lightning Protector for more information and installation instructions.

Step 2: Unpack the Shipping Box

1. Unpack the unit and accessories from the shipping box.
2. Note the Ethernet and MAC addresses of the unit, as well as the serial number. The addresses may be used when configuring the unit. The serial number is required to obtain support from Proxim. Keep this information in a safe place.

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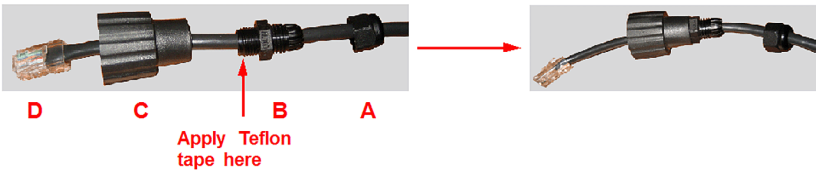
Step 3: Assemble the Cable

You will be attaching an outdoor-rated 24 AWG CAT5 cable (diameter .114 to .250 inches/2.9 to 6.4 mm) (not provided) to the Power-over-Ethernet port on the back of the unit and weatherproofing the assembly later in the installation procedure. First, you must construct the cable and assemble the weatherproofing cable covers as described in the following steps. Proxim greatly simplifies this assembly process by offering pre-assembled CAT5 cable kits in 25m, 50m, and 75m lengths (part numbers 69819, 69820, and 69821, respectively).

1. Slide the sealing nut (A) over the bare end of the CAT5 cable.
2. Slide the lock nut (B) over the bare end of the CAT5 cable.
3. Slide the sealing cap (C) over the bare end of the CAT5 cable. Make sure the red rubber gasket is inside the cap.
4. Apply two wraps of 0.5" wide Teflon tape (not supplied with unit) around the threads of the lock nut (B) that will go inside the sealing cap.
5. Thread the lock nut (B) onto the sealing cap (C), and hand tighten.
6. Terminate the RJ45 connectors (D) to both ends of the CAT5 cable; test for proper wiring (using a straight-through cable).



Notes:

- The cable must feed through all parts of the weatherproof cap before the RJ45 is crimped on the outdoor Ethernet cable.
- The cable between the power injector and the unit must be a straight-through Ethernet cable (without crossover).
- Due to variance in CAT5 cable diameter, termination techniques of the installer, and the application of proper tightness of the connectors, it is strongly recommended that all cable connectors are secured by external weatherproofing. This process will be described in Step 10: Weatherproof the Connectors.

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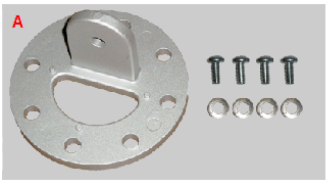
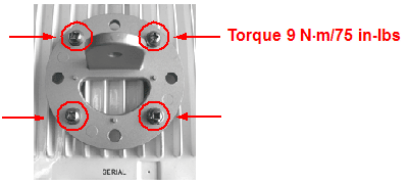
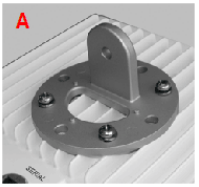
Step 4: Assemble Mounting Hardware

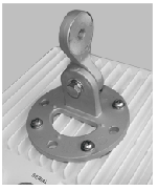
1. Attach the mounting plate (A) using the provided screws and washers (Torque 9 N·m/75 in-lbs)



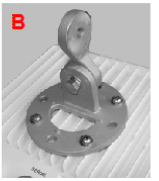


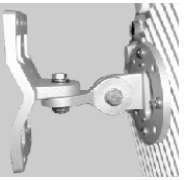
2. Attach the extension arm (B) to mounting piece (A) with the screw, nut, and washers.



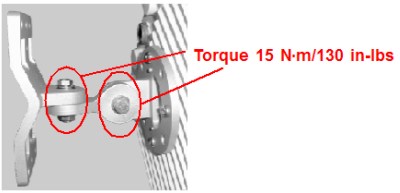


3. Attach the mounting bracket (C) to extension arm (B) with the screw, nut, and washers provided.

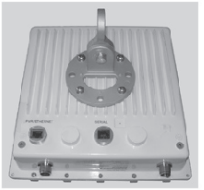




4. Tighten assembly (Torque 15 N·m/130 in-lbs).



The following figure shows the full assembly attached to the unit.



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Step 5: Mount the Unit

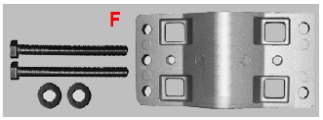
IMPORTANT!

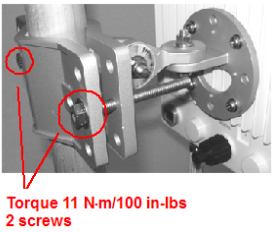
If the AP is going to be used as part of a Mesh network, you will need to perform initial configuration of the parameters mentioned in the **Prerequisites** section of this *AP-4000MR-LR/AP-4900MR-LR User Guide* before you mount the unit. See the User Guide for more information on configuring these parameters.

Caution:

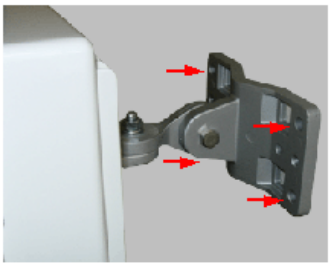
To ensure that water does not gather around the antenna connectors, mount the unit with the antenna connectors facing downward.

1. To pole-mount, insert the provided screws through bracket F. Fasten around the pole to bracket E and secure (Torque 11 N·m/100 in-lbs).





2. To wall-mount the unit, mount bracket (E) to the wall using 4 screws (not provided), as shown.



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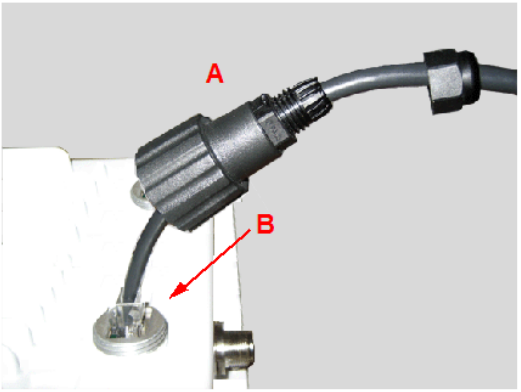
Step 6: Plug in the Cables

1. Plug one end of the CAT5 cable (A) into the RJ45 jack of the unit (B).



Note:

On FC versions, connect the cable to the port labeled "J1 Antenna" on the power injector (not pictured). This port has 48 VDC power on the RJ45.

2. Connect the free end of the CAT5 cable to the "Data and Power Out" port on the power injector.

3. To connect the unit through a hub or a switch to a PC, connect a straight-through Ethernet cable between the network interface card in the PC and the hub, and between the hub and the RJ45 "Data In" port on the PoE adapter.

Note:

On FC units, connect the cable between the hub and the RJ45 "J2 PC/ Router" port on the power injector (not pictured).

To connect the unit directly to a PC, connect a cross-over Ethernet cable between the network interface card in the PC and the RJ45 "Data In" port on the power injector.

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If you are connecting the PC directly to the unit, use a ***crossover*** Ethernet cable between the network interface card in the PC and the RJ45 "Data In" port on the power injector.

Note:

On FC units, connect the cross-over cable between the network interface card in the PC and the and the RJ45 "J2 PC/Router" port on the power injector (not pictured).

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Step 7: Power on the Unit

The power injector provides Power-over-Ethernet (PoE), supplying electricity and wired connectivity to the unit over a single 24 AWG CAT5 (diameter .114 to .250 inches/2.9 to 6.4 mm). The unit is not 802.3af-compatible. Always use the supplied power injector to ensure that the unit is powered properly. Note that the Active Ethernet module provides +48 VDC over a standard CAT5 Ethernet cable.

Once you have connected the power injector to the Ethernet cabling and plugged the power injector cord into an AC outlet, the unit is powered on. There is no ON/OFF switch on the unit. To remove power, unplug the AC cord from the AC outlet or disconnect the RJ45 connector from the "Data and Power Out" port on the power injector.

Note:

On FC units, remove power by unplugging the AC cord from the AC outlet or disconnecting the RJ45 connector from the "J1/Antenna" port on the power injector.

Depressing the **Reload** button (on the side of the power injector) for five seconds during power-up remotely resets the radio to its factory default settings. You will need to use the end of a pin or paperclip to depress the button.

Note:

Power injectors supplied with FC units are not equipped with a **Reload** button.

WARNING!

To avoid damaging your router/switch, do not connect the RJ45 port labeled either "Data & Power Out" or "J1/Antenna" from the power injector to your router/switch.

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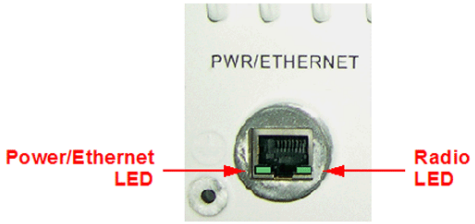
Step 8: View LEDs

On most units, the LEDs are present at the unit's Ethernet connector; unscrew the watertight cap if necessary to view the LEDs.

NOTE:

Make sure the domed sealing nut is loose before unscrewing the cap or the Ethernet cable may be twisted and damaged.



When the unit is powered on, it performs startup diagnostics. When startup is complete, the LEDs show the unit's operational state, as follows:

LED State	Power/Ethernet LED	Radio LED
Blinking Green	Power is on, unit is booting up, Ethernet link is down.	Radios are being initialized.
Steady Green	Power is on, Ethernet link is up.	Radios are being operational.

Note:

On FC units, there is one LED. It is the power LED that appears in the back of the unit, between the cooling fins on the right side. (See Figure 2 and Figure 4.)

On power-up, the LED flashes red during initial start-up, and then turns solid red while booting. After a successful boot, it becomes solid green to indicate normal operation.

Caution!

Before applying power to the units, make sure that a proper load or antenna is connected to each N-female jack to minimize the chance of damaging the internal RF power amplifiers.

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Step 9: Tighten the Cables

1. Apply two wraps of Teflon tape around the threads of the unit's RJ45 jack (A) in a clockwise direction.
2. Make sure that the red rubber gasket is still seated in the sealing cap of the sealing cap/lock nut assembly (B).
3. Slide the sealing cap/lock nut assembly (B) over the RJ45 jack (A) and thread onto enclosure. Hand tighten first, then use a pipe wrench or similar tool to tighten one more quarter turn.

Caution!

Do not over-tighten!

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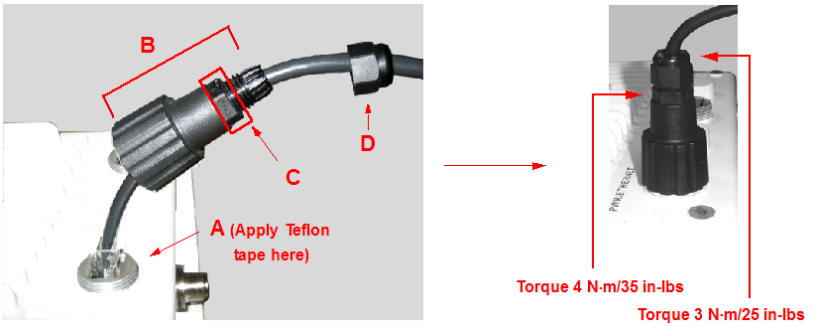
4. Tighten the lock nut (C) (Torque 4 N.m/35 in-lbs).
5. Thread the sealing nut (D) onto the sealing cap/lock nut assembly (B) and tighten (Torque 3 N.m/25 in-lbs).

Caution!

The lock nut (C) on the sealing cap/lock nut assembly (B) must be fully tightened over the RJ45 connector before the sealing nut (D) is fully tightened. Otherwise, the Ethernet cable may twist and damage.



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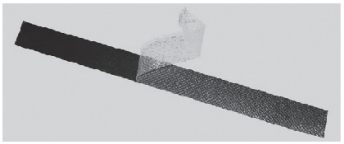
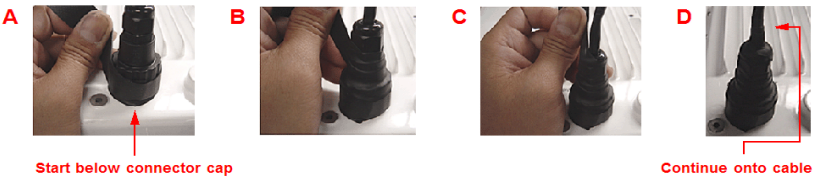
Step 10: Weatherproof the Connectors

After you have fully assembled and tightened the cable, use the provided self-fusing, rubber-based tape strip and electrical tape (not provided; Proxim recommends Scotch™ Super 33+ Vinyl Electrical Tape) to seal the connection, as follows.

1. Remove the film liner from the rubber-based tape strip, and stretch the tape until it is approximately half of its original width. This activates the self-fusing action of the tape, which will set up over time to create a single, waterproof mass.



2. Stretch and wrap the tape around the connector tightly, starting below the connector cap and against the unit and wrapping in a clockwise direction. Wrap the tape once around the base of the connector cap (A). Continue to wrap the tape spirally around the connector in a clockwise direction, maintaining a 50% width overlap (B). Continue wrapping the tape spirally upward (C) until the tape extends onto the cable and you have used the entire length of tape. Seal the tape tightly against the connector and the cable (D).



Note:

Be sure to wrap the tape in a clockwise direction; wrapping the tape in a counterclockwise direction may loosen up the connector.

3. In the same manner as described in Step 2 above, apply a layer of black electrical tape (not provided) over the rubber-based tape for further protection. Make sure the electrical tape also extends beyond the rubber-based tape to seal it.

4. Repeat the weatherproofing procedure for other connectors as appropriate.

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Step 11: Install Documentation and Software

To install the documentation and software on a computer or network:

1. Place the installation CD in a CD-ROM drive. The installer normally starts automatically. (If the installation program does not start automatically, click setup.exe on the installation CD.)

2. Follow the instructions displayed on the installer windows. The following documentation and software products are installed:

   - Available from **Start** > **All Programs** > **ORiNOCO** > **AP-4x00MR-LR**:
     - ScanTool program
     - Online Help
     - User Guide
   - Available from **C:\Program Files\ORiNOCO\AP-4x00MR-LR**:
     - ScanTool program
     - Read Me
     - License agreement
     - Problem report form
     - **PDF folder**, containing:
       - User Guide
       - Quick Install Guide
       - Safety and Regulatory Compliance Guide
     - **HTML folder,** containing:
       - Online Help (double-click on index.htm to launch)
     - **Xtras folder**, containing:
       - TFTP Server
       - Acrobat Reader

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UNIT INITIALIZATION

Using ScanTool

ScanTool is a software utility that is included on the installation CD-ROM. It is an initial configuration tool that allows you to find the IP address of an Access Point by referencing the MAC address in a Scan List, or to assign an IP address if one has not been assigned.

The tool automatically detects the Access Points installed on your network, regardless of IP address, and lets you configure each unit's IP settings. In addition, you can use set initial device parameters that will allow the AP to retrieve a new software to an AP that does not have a valid software image installed.

To access the HTTP interface and configure the AP, the AP must be assigned an IP address that is valid on its Ethernet network. By default, the AP is configured to obtain an IP address automatically from a network Dynamic Host Configuration Protocol (DHCP) server during boot-up. If your network contains a DHCP server, you can run ScanTool to find out what IP address the AP has been assigned. If your network does not contain a DHCP server, the Access Point's IP address defaults to 169.254.128.132. In this case, you can use ScanTool to assign the AP a static IP address that is valid on your network.

Scan Tool Instructions

1. Power up, reboot, or reset the AP.
2. Double-click the ScanTool icon on the Windows desktop to launch the program. If the icon is not on your desktop, click **Start** > **All Programs** > **ORiNOCO** > **AP-4x000MR-LR** > **ScanTool**.

Note:

If your computer has more than one network adapter installed, you will be prompted to select the adapter that you want ScanTool to use before the Scan List appears. You can use either an Ethernet or wireless adaptor.

If prompted, select an adapter and click **OK**. You can change your adapter setting at any time by clicking the **Select Adapter** button on the Scan List screen.

ScanTool scans the subnet and displays all detected Access Points. The ScanTool's Scan List screen appears, as shown in the following example.

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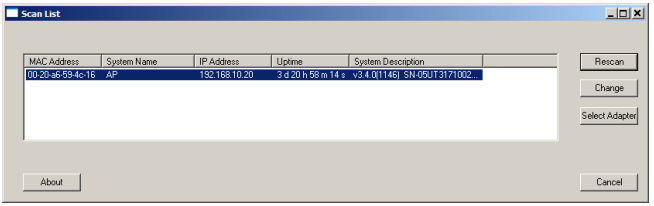


Note:

If your Access Point does not appear in the Scan List, click the **Rescan** button to update the display. If the unit still does not appear in the list, see the Troubleshooting chapter in the *AP-4000MR-LR/4900MR-LR User Guide* for suggestions. Note that after rebooting an Access Point, it may take up to five minutes for the unit to appear in the Scan List.

4. Do one of the following:

- If the AP has been assigned an IP address by a DHCP server on the network:

  a. Highlight the entry for the AP you want to configure.

  b. Click the **Change** button. The Change screen appears (see below).

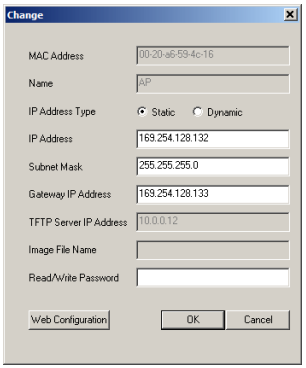
  c. Click on the **Web Configuration** button at the bottom of the change screen.

  d. Proceed to the Logging In section, below.

- If the AP has not been assigned an IP address (in other words, the unit is using its default IP address, 169.254.128.132), follow these steps to assign it a static IP address that is valid on your network:

  a. Highlight the entry for the AP you want to configure.

  b. Click the **Change** button. The Change screen appears.



c. Set **IP Address Type** to Static.

d. Enter a static IP Address for the AP in the field provided. You must assign the unit a unique address that is valid on your IP subnet.

e. Enter your network's **Subnet Mask**.

f. Enter your network's **Gateway IP Address**.

g. Enter the SNMP read/write password in the **Read/Write Password** field. For new units, the default password is **public**

h. Click **OK** to save your changes.

i. The Access Point will need to reboot to apply any changes you made. When the reboot message appears, click **OK** to reboot the device and return to the Scan List screen.

j. After allowing sufficient time for the device to reboot, click **Rescan** to verify that your changes have been applied.

k. Click the **Change** button to return to the Change screen.

l. Click the **Web Configuration** button at the bottom of the Change screen.

m. Proceed to the Logging In section, below.

Logging In

Once the AP has a valid IP Address and an Ethernet connection, you may use your web browser to monitor and configure the AP. (To configure and monitor using the command line interface, see the *AP-4000MR-LR/4900MR-LR User Guide.*)

1. Open a Web browser on a network computer.
2. If necessary, disable the browser's Internet proxy settings.
3. Enter the Access Point's IP address in the browser's **Address** field and press **Enter** or **Go**. This is either the dynamic IP address assigned by a network DHCP server or the static IP address you manually configured. See the Using ScanTool section above for information on how to determine the unit's IP address and manually configure a new IP address, if necessary.
4. The login screen appears.

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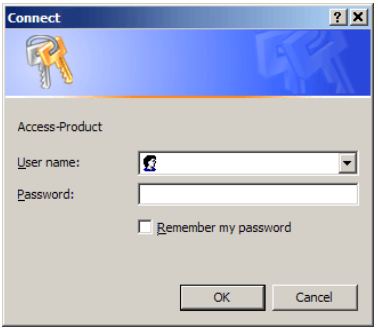

5. Enter the HTTP password in the **Password** field. Leave the **User Name** field blank. For new units, the default HTTP password is **public**.

   If you are logging on for the first time the Setup Wizard will launch automatically.

Note

Setup Wizard will not relaunch on subsequent logins. To force the Setup Wizard to launch upon login, click **Management** > **Services** and choose **Enable** from the **Setup Wizard** drop down menu.

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6. To configure the AP using the Setup Wizard, see Using the Setup Wizard**,** below. To configure the AP without using the Setup Wizard, click **Exit**. Upon clicking Exit, the System Status screen will appear. See the "Advanced Configuration" chapter in the *AP-4000MR-LR/4900MR-LR User Guide* for configuration instructions.

Using the Setup Wizard

The Setup Wizard provides step-by-step instructions for how to configure the Access Point's basic operating parameters, such as Network Name, IP parameters, system parameters, and management passwords.

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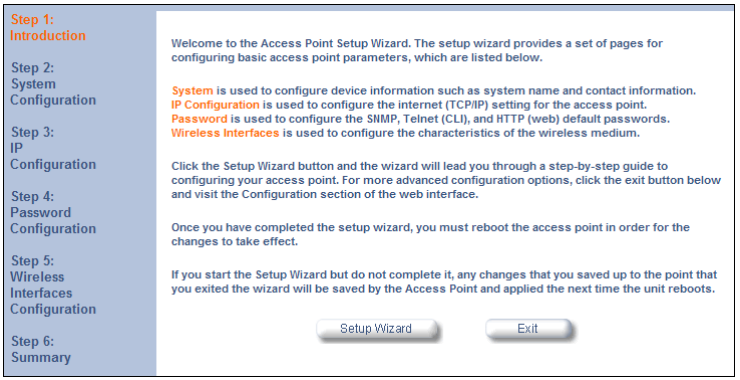
Step 1: Introduction
Step 2: System Configuration
Step 3: IP Configuration
Step 4: Password Configuration
Step 5: Wireless Interfaces Configuration
Step 6: Summary
Welcome to the Access Point Setup Wizard. The setup wizard provides a set of pages for configuring basic access point parameters, which are listed below.
System is used to configure device information such as system name and contact information.
IP Configuration is used to configure the internet (TCP/IP) setting for the access point.
Password is used to configure the SNMP, Telnet (CLI), and HTTP (web) default passwords.
Wireless Interfaces is used to configure the characteristics of the wireless medium.
Click the Setup Wizard button and the wizard will lead you through a step-by-step guide to configuring your access point. For more advanced configuration options, click the exit button below and visit the Configuration section of the web interface.
Once you have completed the setup wizard, you must reboot the access point in order for the changes to take effect.
If you start the Setup Wizard but do not complete it, any changes that you saved up to the point that you exited the wizard will be saved by the Access Point and applied the next time the unit reboots.
Setup Wizard
Exit

1. Click Setup Wizard to begin. The Setup Wizard supports the following navigation options:

   - **Save & Next Button**: Each Setup Wizard screen has a Save & Next button. Click this button to submit any changes you made to the unit's parameters and continue to the next page. The instructions below describe how to navigate the Setup Wizard using the Save & Next buttons.
   - **Navigation Panel**: The Setup Wizard provides a navigation panel on the left-hand side of the screen. Click the link that corresponds to the parameters you want to configure to be taken to that particular configuration screen. Note that clicking a link in the navigation panel will not submit any changes you made to the unit's configuration on the current page.
   - **Exit**: To exit from the Setup Wizard at any time, click Step 1: Introduction on the navigation panel, and then click the Exit button.

CAUTION:

If you exit from the Setup Wizard, any changes you submitted (by clicking the Save & Next button) up to that point will be saved to the unit but will not take effect until it is rebooted.

2. Follow the prompts provided by the Setup Wizard to perform an initial configuration of the AP. See the *AP-4000MR-LR/4900MR-LR User Guide* for more detailed Setup Wizard instructions and for advanced configuration instructions.

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SOFTWARE UPDATES

Proxim periodically releases updated software for the AP-4000MR-LR/4900MR-LR on its support Web site, http://support.proxim.com. Proxim recommends that you check the Web site for the latest updates after you have installed and initialized the unit.

Download the Software

1. In your web browser, go to http://support.proxim.com.
2. If prompted, create an account to gain access.

Note:

The Knowledgebase is available to all Web site visitors. First-time users will be asked to create an account to gain access.

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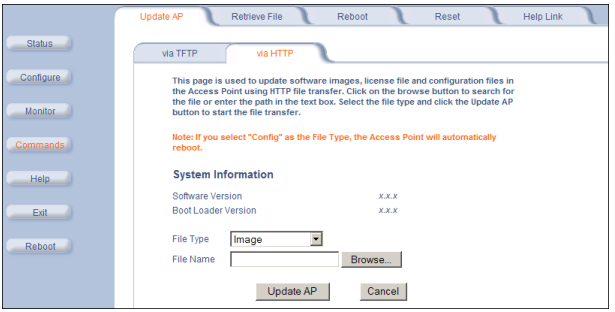
3. Click **Search Knowledgebase**.
4. In the **Search Knowledgebase** field, do one of the following:
   - For the AP-4000MR-LR, enter: **2413**.
   - For the AP-4900MR-LR, enter: **2518**
5. Click **Search**.
6. Click on the link in the **Summary** column to access the download page.
7. Click on the appropriate link to download the software.

Install the Software

1. Enter the Access Point's IP address in the browser's Address field and press **Enter** or **Go**.
2. Click **Commands** > **Update AP** > **via HTTP**. The Update AP via HTTP screen will be displayed.



3. From the **File Type** drop-down menu, select **Image**.

4. Use the **Browse** button to locate or manually type in the name of the file (including the file extension) you downloaded from the Proxim Knowledgebase. If typing the file name, you must include the full path and the file extension in the file name text box.

5. To initiate the HTTP Update operation, click the **Update AP** button.

   A warning message advises you that a reboot of the device will be required for changes to take effect.

7. Click **OK** to continue with the operation or Cancel to abort the operation.

8. If the operation is unsuccessful, you will receive an error message. See the *AP-4000MR-LR/4900MR-LR User Guide* for more information. If the operation is successful, you will receive a confirmation message.

9. Reboot the AP as follows:

   a. Click **Commands** > **Reboot**.

   b. Enter **0** in the **Time to Reboot** field.

   c. Click **OK**.

Note:

For instructions on downloading the software via a TFTP Server or the CLI Interface, see the *AP-4000MR-LR/4900MR-LR User Guide*.

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FREQUENCIES AND BANDWIDTHS

Available channels vary depending on product.

2.4 GHz Frequencies and Bandwidths (AP-4000MR-LR/4900MR-LR)

Channel	Center Frequency (MHz)	20 MHz
1	2412	✓
2	2417	✓
3	2422	✓
4	2427	✓
5	2432	✓
6	2437	✓
7	2442	✓
8	2447	✓
9	2452	✓
10	2457	✓
11	2462	✓
12	2467	✓

✓ = Occupied bandwidth for specified center frequency.

5 GHz Frequencies and Bandwidths (AP-4000MR-LR only)

Channel	Center Frequency (MHz)	20 MHz
149	5745	✓
153	5765	✓
157	5785	✓
161	5805	✓
165	5825	✓

✓ = Occupied bandwidth for specified center frequency.

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4.9 GHz Frequencies and Bandwidths (AP-4900MR-LR only)

Channel	Center Frequency (MHz)	10 MHz	20 MHz
10	4945	✓	NA
20	4950	✓	✓
30	4955	✓	✓
40	4960	✓	✓
40	4960	✓	✓
50	4965	✓	✓
60	4970	✓	✓
70	4975	✓	✓
80	4980	✓	✓
90	4985	✓	NA

✓ = Occupied bandwidth for specified center frequency.

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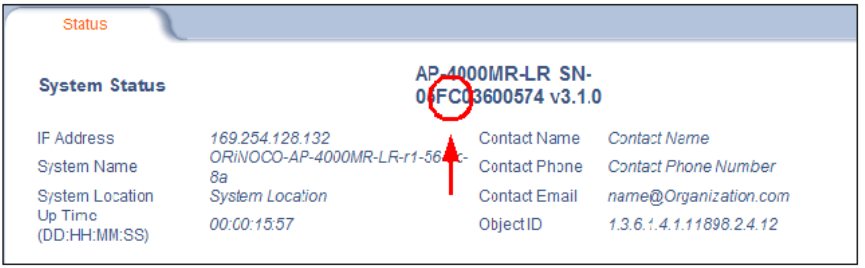
IDENTIFYING YOUR HARDWARE VARIANT

You can verify which hardware version you are using through the HTTP Interface, as described below.

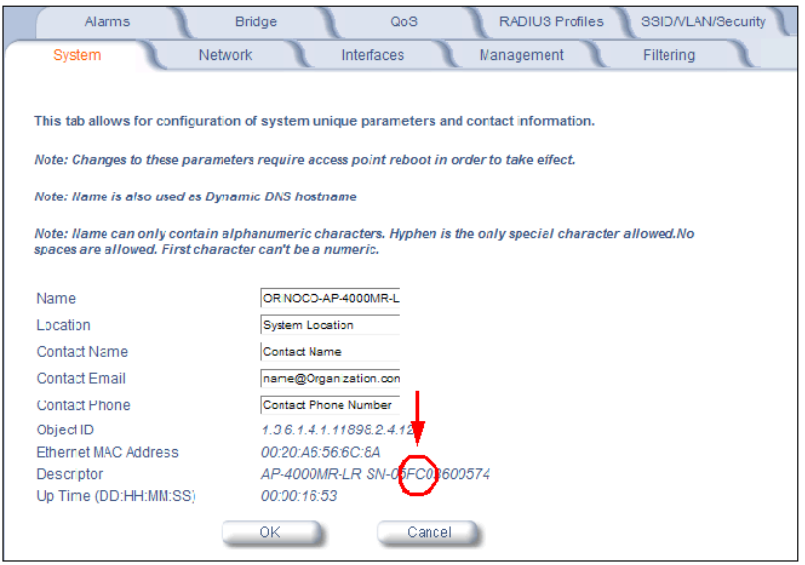
Status Page

On the **Status** page, locate the product ID and serial number at the top of the page. If the serial number contains "FC" (as shown in the following figure), you are using the FC hardware variant.



Configure > System Page

On the **Configure > System** page, locate the **Descriptor** field. If the field contains "FC" (as shown in the following figure), you are using the FC hardware variant.



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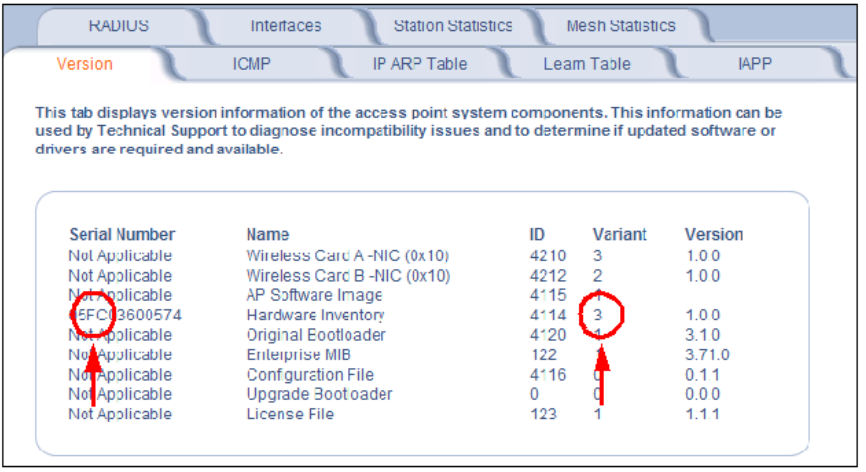
Monitor > Version Page

On the **Monitor > Version** page, locate the **Hardware Inventory** row. If the serial number listed in that row contains "FC" or if the variant listed in that row is "3" (as shown in the following figure), you are using the FC hardware variant.



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TECHNICAL SERVICES AND SUPPORT

If you are having trouble utilizing your Proxim product, please review the *AP-4000MR-LR/4900MR-LR User Guide* and the additional documentation provided with your product.

If you require additional support, please refer to the "Technical Services and Support" chapter in the *AP-4000MR-LR/4900MR-LR User Guide* for details about the information you will need to gather before using the Support Options listed below.

Support Options

Proxim eService Web Site Support

The Proxim eService Web site is available 7x24x365 at:

- http://support.proxim.com

Telephone Support

Contact technical support via telephone as follows:

- Domestic: 866-674-6626
- International: +1-408-542-5390

Hours of Operation

- North America: 8 a.m. to 5 p.m. PST, Monday through Friday
- EMEA: 8 a.m. to 5 p.m. GMT, Monday through Friday

ServPak Support

Proxim understands that service and support requirements vary from customer to customer. In recognition of these varying requirements we have developed a support program called ServPak. ServPak is a program of Enhanced Service Options that can be purchased individually or in combinations to meet your needs.

- Advanced Replacement
- Extended Warranty
- 7x24x365 Technical Support
- Priority Queuing

To learn more, please call Proxim Support at +1-408-542-5390 or send an email to servpak@proxim.com. To purchase ServPak support services, please contact your authorized Proxim distributor.

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